

# ARNOLD ARBORETUM

## HARVARD UNIVERSITY



### BULLETIN

OF

### POPULAR INFORMATION

---

JAMAICA PLAIN, MASS.JULY 13, 1917

---

The high price obtained in England before the war for willow wood for cricket bats resulted in investigations of the different trees from which wood suitable for this purpose could be obtained. The most valuable tree for this purpose is described by English timber dealers as "Close Bark" Willow, and is either a form of *Salix alba calva*, or var. *coerulea*, or as some authors believe a species, *S. coerulea*. This "Close Bark" tree from which the best timber for the purpose is obtained is found in England only in a few of the southeastern counties and is a seed-bearing, or pistillate tree, of strict pyramidal habit, sometimes when planted in good soil one hundred feet high, and as it grows rapidly the distance between the lateral branchlets makes the crown of foliage appear thin. That this tree when planted in soil which suits it grows rapidly is shown in the statement published by Elwes in "The Trees of Great Britain and Ireland," that a tree which was planted at Boreham in Essex in 1835 and felled in 1888 when it was one hundred and one feet tall had a trunk five feet nine inches in diameter. From the wood of this tree eleven hundred and seventy-nine cricket bats were made. Elwes reports the purchase of a piece of land for \$250 on which in sixteen years Willows of this variety were grown which sold for \$10,000, and quotes the statement that a good set (a straight piece of a branch about the thickness of a broom-handle to set in the ground like a cutting) costing from twenty-five to thirty cents, when planted in suitable soil and has grown well is worth from \$25 to \$40 in fifteen years.

There are two other Willows which produce wood used for this purpose, although it is considered less valuable. The better of these is one of the hybrids between *Salix alba* and *S. fragilis* for which the

oldest general name is *S. rubens* but which is also called *S. viridis*, *S. Russelliana* and *S. decipiens*. *S. fragilis*, known in the English trade as the "Open Bark" Willow, also furnishes wood used for bats but is considered even less valuable than that of *S. rubens*.

All the so-called Cricket Bat Willows are established in the Arboretum, and it is possible, although hardly probable, that the demand for the wood in England or its Colonies may make the cultivation of the best "Close Bark" Willow a profitable agricultural operation in some parts of this country. It is possible, too, that some other use for the wood of this tree may make its cultivation as a timber tree profitable here. As an ornamental tree, however, this Willow deserves the attention of American planters, for no Willow will grow more rapidly, and in habit it differs from the Tree Willows which are usually seen in the eastern states.

In the northeastern part of North America there are only two native Willows, *Salix nigra* and *S. amygdaloides*, which are trees of any size, and the latter does not grow spontaneously in New England; and the great Tree Willows which make such a feature in the landscape of the northern and middle states are all naturalized European trees. Little critical study, apparently, has been given to these introduced trees and they have usually been considered either the White Willow (*S. alba*) and its variety *coerulea* or the Crack Willow (*S. fragilis*). The Crack Willow is distinguished by its coarsely serrate leaves obliquely long-pointed at the apex, and usually about four inches long and three-quarters of an inch wide. The catkins of staminate flowers of this tree are often forked. It is called Crack Willow because the branchlets are easily separated from the branches in spring. This tree is not rare in New England, and sixty or seventy years ago there were many large specimens in the neighborhood of Boston; but it is more common in eastern Pennsylvania and northern Delaware where it was early introduced by the Duponts to supply charcoal for their powder works.

The White Willow (*S. alba*) can be distinguished from the Crack Willow by its shorter and narrower leaves usually from two to two and a half inches in length and rarely more than half an inch in width, and covered with whitish silky hairs which are most abundant on the lower surface. This, like the Crack Willow, is a large tree with wide-spreading branches. There is a handsome variety of the White Willow on which the young branches and the leaves are thickly covered with silvery white tomentum. This tree is sometimes found in American nurseries where it is usually called *S. regalis*, although the correct name for it is *S. alba*, var. *argentea*. If the real *S. alba* is among the European Willows naturalized in the United States it is probably rare.

The Blue Willow, which is considered by some English botanists to be a variety of the White Willow and by others a species, is a taller and more pyramidal tree with leaves similar in size and shape to those of the White Willow but rather thinner, less covered with down and bluish gray not whitish on the lower surface. It is very doubtful if this tree, which is the best Close Bark Bat Willow, has been naturalized in any part of the United States; and it is probable that the Willow-trees which are scattered along the river-banks of the northern states are hybrids between *S. alba* and *S. fragilis* for which the oldest gen-



eral name is *S. rubens*, although under this general name are several different trees of the same hybrid parentage to which different names have been given.

It is not known here if trees of the two sexes of this hybrid exist in the United States, and nothing is known of the distribution in different parts of the country of the different forms of the hybrid; and if any reader of this Bulletin has paid attention to the Tree Willows naturalized in the United States, the Arboretum will be glad to hear from him.

**Staphyleas.** A reader of these Bulletins has asked us to say something about Staphyleas, or Bladder Nuts as these plants are popularly called. Staphylea is a genus of shrubs with opposite, trifoliate or pinnate, deciduous leaves and terminal clusters of small white or pinkish flowers, and much inflated, membranaceous, pod-like fruits which vary in length on the different species from one to four inches. There are several species and one hybrid, and a species occurs in each of the chief botanical regions of the northern hemisphere. All these plants, with the exception of the Himalayan *S. Emodi*, are in the Arboretum, but in the Shrub Collection where the winter conditions are more severe than in any other parts of the Arboretum they are often killed nearly to the ground by cold and give little satisfaction. The plants on Azalea and Hickory Paths do better, and probably all the species would flower and ripen their fruit here if the right place could be found for them.

The species of eastern North America, *S. trifolia*, grows from the Province of Quebec westward to Nebraska and southward to Oklahoma and Georgia. It is occasionally seen in old gardens in this country and in England it has been cultivated for two hundred years. As a garden plant, however, it has little to recommend it. The northern California species, *S. Bolanderi*, exists on Hickory Path but has not yet flowered in the Arboretum. *Staphylea holocarpa* has pinkish flowers which appear before the leaves, and is a small tree sometimes twenty feet high discovered by Wilson in central China and considered by him one of the handsomest flowering trees which he saw in China. This plant can be seen on the upper side of Azalea Path where the ends of the branches are often killed by cold; it has not yet flowered in the Arboretum. The species already named have leaves with three leaflets: the following usually have leaves with from five to seven leaflets. *S. pinnata*, which is widely distributed through Europe to western Asia, is a tree-like shrub and sometimes flowers here but has little value as a garden plant in this climate. The Caucasian *S. colchica*, which differs from *S. pinnata* in its larger flowers and fruits and in the lustrous lower surface of the leaves, is the handsomest of the Bladder Nuts and well worth cultivation. Small plants flower freely and are often used in England for the winter decoration of conservatories. A variety of this plant, or a hybrid between it and *S. pinnata*, is *S. Coulombieri* which appeared many years ago in a French nursery and is distinguished by its larger leaves and by the flowers and fruit which are intermediate in size between those of its supposed parents. The variety *Hessei* of *S. colchica*, distinguished by its pinkish flowers, is in the collection but has not yet flowered here.



**Some Asiatic Maples.** Another reader of these Bulletins asks for information about *Acer capillipes*, *A. truncatum*, *A. mandschuricum* and *A. Henryi*.

*Acer capillipes* is related to the North American Striped Maple or Moosewood (*Acer pennsylvanicum*) and has the same three-lobed leaves which are bright red as they unfold, smaller fruit on longer stems and even more beautiful green and white striped bark. This Maple appears to be exceedingly rare in Japan. Professor Sargent saw one tree hanging over the bank of the Kisogawa near Agamatsu on the Nagasendo Road in Japan. The plants raised from the seeds gathered by him from this tree appear to be the only ones in cultivation in the United States and Europe. The rarity of this tree is shown by the fact that it was not seen by Wilson in his extensive travels in Japan, and the plants raised from the seed which he secured in Japan of what was called *Acer capillipes* prove to be the common *A. rufinerve*. *A. capillipes* has not grown well in the Arboretum, and the plants now twenty-five years old are still shrubs and have not flowered. Even if it could be obtained, this tree, judging by its behavior in the Arboretum, could not be recommended for planting in the northern states.

*Acer truncatum* is a native of northern China and was raised at the Arboretum in 1882. It is a small tree with deeply five-lobed leaves usually nearly square at the base, purplish as they unfold and light green and shining during the summer. This tree is perfectly hardy here, although it sometimes suffers from the splitting of the bark in winter. It has not produced seeds in the Arboretum where there are now only comparatively small plants, the plants first raised here having already disappeared. One of the original plants, then about twenty feet high, was standing a few years ago in the Ellwanger & Barry Nursery in Rochester, New York.

*Acer mandschuricum* is one of the Trifoliate Maples with leaves composed of three narrow, long-pointed leaflets which are red as they unfold and long, slender, bright red stalks. This is one of the large trees in the mountain forests of eastern Siberia, forming a massive trunk and a great head of wide-spreading branches. It is perfectly hardy in the Arboretum where it has grown rapidly and is producing fruit this year for the first time. This is one of the most interesting of the Maples here of recent introduction, and promises to become a valuable ornamental tree in this climate.

*Acer Henryi* is a small tree of central and northern China, related to the North American Box Elder or Ash-leaved Maple (*Acer Negundo*), from which it differs in the smaller number of leaflets which are usually three, while the leaves of the American *Negundo* are composed of from three to seven leaflets. The flowers of the Chinese tree are provided with petals which are not found on those of its American relative. *A. Henryi*, which has been tried in various situations in the Arboretum, grows badly in all and is usually seriously injured by cold. It cannot therefore be recommended for general cultivation here or as a substitute for the American *Acer Negundo* which is a perfectly hardy and fast-growing tree.